

Abstract

The present invention provides a magnetic resonance imaging system capable of performing spectrum measurement even when a magnetic resonant frequency changes during MRS measurement. A 5 time-varying rate of a water magnetic resonant frequency is measured in advance before the MRS measurement. The amount of change in water magnetic resonant frequency during the MRS measurement is predicted from the measured time-varying rate. With the predicted value as the reference, a transmission 10 frequency of an RF magnetic field irradiated in a signal suppression pulse sequence, a transmission frequency of an RF magnetic field for excitation and inversion and a received frequency at the detection of a magnetic resonance signal in a sequence of the MRS measurement are respectively set. A 15 high-precision spectrum measurement is hence enabled.